METHODS FOR INDUCING T CELL TOLERANCE TO A TISSUE OR ORGAN GRAFT

Abstract

Methods for inducing T cell tolerance to a tissue or organ graft in a transplant recipeint are disclosed. The methods involve administering to a subject: 1) an allogeneic or xenogeneic cell which expresses donor antigens and which has a ligand on the cell surface which interacts with a receptor on the surface of a recipient T cell which mediates contact-dependent helper effector function; and 2) an antagonist of the receptor which inhibits interaction of the ligand with the receptor. In a preferred embodiment, the allogeneic or xenogeneic cell is a B cell, preferably a resting B cell, and the molecule on the surface of the T cell which mediates contact-dependent helper effector function is gp39. A preferred gp39 antagonist is an anti-gp39 antibody. The allogeneic or xenogeneic cell and the gp39 antagonist are typically administered to a transplant recipient prior to transplantation of the tissue or organ. The methods of the invention can be used to induce T cell tolerance to transplants such as liver, kidney, heart, lung, skin, muscle, neuronal tissue, stomach and intestine. A method for treating diabetes comprising administering to a subject allogeneic or xenogeneic cells expressing donor antigens, a gp39 antagonist and pancreatic islets is also disclosed.